PATENT

New National Stage Application PRELIMINARY AMENDMENT

## IN THE CLAIMS:

Please cancel claims 1-8 without prejudice or disclaimer, and add new claims 9-17 as shown in the detailed listing set forth below of all claims which were, or are, in the application:

## Claims 1-8 (Canceled)

- 9. (New) An apparatus to assist a patient's respiration by delivering air to a patient through a mask, comprising:
- a blower to provide the patient with air under a treatment pressure,
- a control unit to adjust the pressure delivered by said blower at the level of said mask,
- a ramp module connected to the control unit in order to provide the control unit with a value of pressure  $P_M$  to settle at said mask, so that when said apparatus starts functioning, the pressure progressively rises until the pressure of treatment  $P_T$ ; and
- a comparator connected to the ramp module, at least one means for detecting the patient's breathing parameters and sending them to said comparator such that the comparator is able to determine whether an event  $(E_1,\ E_2\ or\ E_3)$  occurs in patient's breathing based on said breathing parameters and to send the corresponding data to the ramp module which provides the control unit with a value of

New National Stage Application PRELIMINARY AMENDMENT

PATENT

pressure  $P_M$  that will speed up with respect of time, so that the rise of pressure at patient's mask is accelerated within the time when the ramp is activated.

- 10. (New) The apparatus according to claim 9, wherein said ramp module provides the value of pressure  $P_m$  being a linear function of time wherein an increase coefficient  $K_{RP}$  is constant, said ramp module increasing that coefficient of a constant value  $K_E$  when the control unit sends a data corresponding to said event ( $E_1$ ,  $E_2$  or  $E_3$ ).
- 11. (New) The apparatus according to claim 9, wherein the value of pressure  $P_{\text{M}}$  has always maximum and/or minimum limits so that the increase of pressure is also limited in minimum and/or maximum.
- 12. (New) The apparatus according to claim 10, wherein said ramp module comprises a memory where a minimum coefficient  $K_{SRP}$  is stored, said ramp module always maintaining the coefficient  $K_{SRP}$  equal or greater than said minimum coefficient  $K_{SRP}$ , so that the ramp module provides the control unit with a value of pressure  $P_M$  always greater than a minimum limit.
- 13. (New) The apparatus according to claim 10, wherein said ramp module comprises a memory where a maximum coefficient  $K_{\text{MRP}}$  is

New National Stage Application PRELIMINARY AMENDMENT

PATENT

stored, said ramp module always maintaining the coefficient  $K_{RP}$  equal or less than said maximum coefficient  $K_{MRP}$ , so that the ramp module provides the control unit with a value of pressure  $P_M$  always less than a maximum limit.

- 14. (New) The apparatus according to claim 9, wherein said means for detecting the patient's breathing parameters enable the control unit to compute the airflow at patient's mask, said comparator determining whether an event  $(E_1,\ E_2\ or\ E_3)$  is occurring with the airflow parameters or shape.
- 15. (New) The apparatus according to claim 9, wherein the ramp module increases the value of pressure  $P_{\text{M}}$  when an anomaly in patient's breathing is detected.
- 16. (New) The apparatus of claim 15, wherein said anomaly is either snoring or apnea.
- 17. (New) The apparatus according to claim 9, wherein the ramp module increases the value of pressure  $P_M$  when the patient's breathing parameters correspond to a drop between awake breathing and asleep breathing or when they correspond to a stable frequency of breathing.